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| 09/823,282      | 03/30/2001  | Teruhiro Yamada      | 263/123             | 6783             |

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EXAMINER

LAO, TIM P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2655

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DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/823,282

Applicant(s)

YAMADA ET AL.

Examiner

Tim Lao

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-30 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ ~~Claim(s) 2 and 12 is/are objected to~~ *02*
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 2 and 12 are objected to because of the following informalities:

As best understood from the claim language,

- (a) Claim 2 should be depended upon claim 1;
- (b) Claim 12 should be depended upon claim 11.

The examiner will assume the above claim relationship in determining the validity of claims 2 and 12. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-17, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bennett et al. (U.S. Patent 6,615,172 B1).

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| Claim(s)<br>1 | Bennett et al. disclose:<br><br>A user support system (see Abstract; col.6, ll.27-30) comprising: |
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|               | <p>a first block (Fig.1: SRE server-side <b>182</b>, Text-to-Query Converter <b>184</b>, Database Processor &amp; Interface <b>186</b>, and Natural Language Engine <b>190</b>) which has an electronic collection of user utterances (e.g., a set of potential questions corresponding to the user's query, col.25, ll.1-44; Fig.11a, 11b), and identifies a content of a given user utterance (e.g., identifies the content posed by the user question or query, col.11, ll.32-34); and</p> <p><i>{1. Blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b> act as a first block, e.g., it receives the user utterance, parses the content, and understands the content lexically or morphologically. (col.12, ll.1-10)</i></p> <p><i>2. The set of potential questions, i.e., the collection of user utterances, corresponding to the user query is located on the Structured Query Language (SQL) database (Fig.4C: <b>711C</b>) of DB engine server <b>186</b> (col.11, ll.6-9; col.25, ll.2-10; col.26, ll.30-32) whereas the answer to the most likely candidate of questions is located on the Natural Language Query System (NLQS) Database <b>188</b> (col.11, ll.9-11; Fig.4C: <b>717</b>; col.29, ll.29).</i></p> <p><i>3. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig.10: <b>1010</b>). The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.</i></p> <p><i>4. The collection of utterances is stored in the Full-Text Catalog (Fig.10: <b>1013</b>).}</i></p> <p>a second block (Fig.1: NLQS database <b>188</b>, Animated Character to Guide User <b>157</b>, and Text-to-Speech Engine <b>159</b>) which has an electronic collection of action patterns (e.g., different interactions of the animated character <b>1440</b> in responding to the user, col.35, ll.64-67; col.20, ll.61-67; col.21, ll.1-3) for an agent for responding to user utterances, and enables the agent to respond to the given user utterance; (col.35, ll.64-67; col.36, ll.1-12, ll.33-51; col.20, ll.45-67; col.21, ll.1-14)</p> <p>wherein the user utterance collection and the agent action collection are separately constructed by configuring the first block and the second block separately. (Fig.1)</p> <p><i>{1. Blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b> are configured separately from blocks <b>188</b>, <b>157</b>, and <b>159</b>. (Fig.1)</i></p> <p><i>2. The user utterance collection (e.g., a set of potential questions corresponding to the user's query) is constructed within the Database Processor &amp; Interface <b>186</b> while the agent action collection (e.g., actions of the animated character <b>1440</b>) is constructed within the Animated Character to Guide User <b>157</b>.}</i></p> |
| Claim(s)<br>2 | Bennett et al. disclose:  |

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|                       | <p>The system of claim 2, wherein the system is connected with a user terminal (e.g., desktop PC on client side system <b>150</b>, col.10, ll.20-26) via a network (e.g., Internet <b>160</b>, col.10, ll.33-35), and the first block (blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b>) and the second block (blocks <b>188</b>, <b>157</b>, and <b>159</b>) are configured as different network nodes. (see Fig.1)</p>   |
| <p>Claim(s)<br/>3</p> | <p>Bennett et al. disclose:</p> <p>The system of claim 1, wherein the system includes a plurality of the second blocks (e.g., NLQS database <b>188</b> includes e-support database and e-commerce database), and each of the second blocks offers a specialized service (e.g., e-support, e-commerce) to the user. (col.6, ll.18-22; col.29, ll.47-67)</p>  |
| <p>Claim(s)<br/>4</p> | <p>Bennett et al. disclose:</p> <p>The system of claim 1, wherein the first block includes:</p> <p>an utterance search unit (SRE server-side <b>182</b> &amp; DB Processor, Fig.1: <b>186</b>) which searches the utterance of the user (e.g., use query) in the user utterance collection (e.g., SQL database, Fig.4C: <b>711</b>); (see Fig.4B, 4C; col.28, ll.44-67; col.29, ll.1-28) and</p> <p><i>{1. Fig.4B shows how a best suitable question corresponding to the user query is retrieved from the SQL database. (col.28, ll.44-51, ll.65-67)</i></p> <p><i>2. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig.10: <b>1010</b>).}</i></p> <p>a reporting unit which notifies a system administrator (col.31, ll.15-16) when the user utterance is not found in the user utterance collection. (col.36, ll.16-24)</p> <p><i>{When a question is not available through the SQL Search Service <b>1010</b>, there is inherently a reporting unit within the server-side system <b>180</b> in order for the system administrator and the user to be notified.}</i></p> |
| <p>Claim(s)<br/>6</p> | <p>Bennett et al. disclose:</p> <p>The system of claim 1, wherein the second block chooses one from a plurality of choices of the actions (e.g., different interaction capabilities that can be adjusted) of the agent to respond to the user utterance depending on an attribute of the user. (col.20, ll.61-67; col.21, ll.1-3; col.36, ll.8-12)</p>  |

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| <p>Claim(s)<br/>7</p> | <p>Bennett et al. disclose:</p> <p>The system of claim 4, wherein the first block further includes an index storing unit (e.g., Full-Text Index, Fig.10: <b>1014</b>) that stores an index of contents of the user utterance collection, and the search unit (SQL Search Service, Fig.10: <b>1010</b>) initially searches the given user utterance (e.g., user query) for the index storing unit. (col.18, ll.20-29; col.31, ll.34-57; col.32, ll.1-38)</p>   |
| <p>Claim(s)<br/>8</p> | <p>Bennett et al. disclose:</p> <p>A user support system (see Abstract; col.6, ll.27-30), comprising:</p> <p>an electronic collection of user utterances (e.g., a set of potential questions corresponding to the user's query, col.25, ll.1-44; Fig.11a, 11b);<br/> <i>{The set of potential questions, i.e., the collection of user utterances, corresponding to the user query is located on the Structured Query Language (SQL) database (Fig.4C: <b>711C</b>) of DB engine server <b>186</b> (col.11, ll.6-9; col.25, ll.2-10; col.26, ll.30-32) whereas the answer to the most likely candidate of questions is located on the Natural Language Query System (NLQS) Database <b>188</b> (col.11, ll.9-11; Fig.4C: <b>717</b>; col.29, ll.29).}</i></p> <p>an index storing unit that stores (e.g., Full-Text Index, Fig.10: <b>1014</b>) an index of contents of the user utterance collection; (col.18, ll.20-29; col.31, ll.34-57; col.32, ll.1-38).</p> <p>an utterance obtaining unit (SRE client-side, Fig.1: <b>155</b>; Fig.2B: <b>208</b>) which obtains an utterance inputted by the user;</p> <p>an utterance search unit (SRE server-side <b>182</b> &amp; DB Processor, Fig.1: <b>186</b>) which identifies a content of the obtained utterance by conducting a search using the index (Full-Text Index, Fig.10: <b>1014</b>); (col.11, ll.44-46; col.18, ll.20-29) and<br/> <i>{The DB Processor <b>186</b> conducts the search through the Index Engine <b>1011B</b> and Search Engine <b>1012</b> using Full-Text Index <b>1014</b>. The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.}</i></p> <p>an electronic collection of actions (e.g., different interaction capabilities that can be</p> |

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|                | adjusted) of an agent for responding to the identified utterance (e.g. answer to the best suitable question), wherein a response to the identified utterance is performed by the agent (e.g., Character <b>1440</b> ). (col.20, ll.61-67; col.21, ll.1-3; col.35, ll.64-67; col.36, ll.1-12)   |
| Claim(s)<br>9  | <p>Bennett et al. disclose:</p> <p>The system of claim 8, wherein the utterance search unit (SQL Search Service, Fig.10: <b>1010</b>) identifies the content of the obtained utterance (e.g., Full-Text Query, Fig.10: <b>1008</b>) using a full text search. (col.18, ll.20-29)</p>   |
| Claim(s)<br>10 | <p>Bennett et al. disclose:</p> <p>The system of claim 8, further comprising a reporting unit which notifies a system administrator (col.31, ll.15-16) when an appropriate response to the obtained utterance cannot be conducted. (col.36, ll.16-24)</p> <p><i>{When a question is not available through the SQL Search Service <b>1010</b>, there is inherently a reporting unit within the server-side system <b>180</b> in order for the system administrator and the user to be notified.}</i></p>  |
| Claim(s)<br>11 | <p>Bennett et al. disclose:</p> <p>A translation system (col.10, ll.20-32) comprising:</p> <p>a first block (Fig.1: SRE server-side <b>182</b>, Text-to-Query Converter <b>184</b>, Database Processor &amp; Interface <b>186</b>, and Natural Language Engine <b>190</b>) which has an electronic collection of user utterances (e.g., a set of potential questions corresponding to the user's query, col.25, ll.1-44; Fig.11a, 11b), and identifies a content of a given user utterance (e.g., identifies the content posed by the user question or query, col.11, ll.32-34); and</p> <p><i>{1. Blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b> act as a first block, e.g., it receives the user utterance, parses the content, and understands the content lexically or morphologically. (col.12, ll.1-10)</i></p> <p><i>2. The set of potential questions, i.e., the collection of user utterances, corresponding to the user query is located on the Structured Query Language (SQL) database (Fig.4C: <b>711C</b>) of DB engine server <b>186</b> (col.11, ll.6-9; col.25, ll.2-10; col.26, ll.30-32) whereas the answer to the most likely candidate of questions is located on the Natural Language Query System (NLQS) Database <b>188</b> (col.11, ll.9-11; Fig.4C: <b>717</b>; col.29, ll.29).</i></p> |

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|                        | <p>3. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig. 10: <b>1010</b>). The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.</p> <p>4. The collection of utterances is stored in the Full-Text Catalog (Fig. 10: <b>1013</b>).}</p> <p>a second block (Fig. 1: NLQS database <b>188</b>, Animated Character to Guide User <b>157</b>, and Text-to-Speech Engine <b>159</b>) which has an electronic dictionary file (e.g., Natural Language Voice Data File, Fig. 3: <b>256</b>, col. 24, ll. 1-4) for translating the user utterance (e.g., in English), and provides the user with an expression corresponding to the utterance in another language (e.g., French or Japanese);</p> <p>{In Fig. 3: <b>243</b>, the modules of MS Agent <b>244</b> and Text-to-Speech <b>245</b> illustrates the functionality of the schematic blocks of Animated Character to Guide User <b>157</b> and Text-to-Speech Engine <b>159</b>. (col. 23, ll. 53-67; col. 24, ll. 1-8)}</p> <p>wherein the first block and the second block are configured as different nodes accessing a network so that the user utterance collection and the dictionary file are separately constructed. (Fig. 1)</p> <p>{1. Blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b> are configured separately from blocks <b>188</b>, <b>157</b>, and <b>159</b>. (Fig. 1)</p> <p>2. The user utterance collection (e.g., a set of potential questions corresponding to the user's query) is constructed within the Database Processor &amp; Interface <b>186</b> while the dictionary file (e.g., Natural Language Voice Data File <b>256</b>) is constructed within the Text-to-Speech Engine <b>159</b>.}</p> |
| <p>Claim(s)<br/>12</p> | <p>Bennett et al. disclose:</p> <p>The system of claim 11, wherein the first block includes:</p> <p>an utterance search unit (SRE server-side <b>182</b> &amp; DB Processor, Fig. 1: <b>186</b>) which searches the utterance of the user (e.g., use query) in the user utterance collection (e.g., SQL database, Fig. 4C: <b>711</b>); (see Fig. 4B, 4C; col. 28, ll. 44-67; col. 29, ll. 1-28) and</p> <p>{1. Fig. 4B shows how a best suitable question corresponding to the user query is retrieved from the SQL database. (col. 28, ll. 44-51, ll. 65-67)</p> <p>2. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig. 10: <b>1010</b>).}</p>  |



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|                        | <p>a reporting unit which notifies a system administrator (col.31, ll.15-16) when the user utterance is not found in the user utterance collection. (col.36, ll.16-24)</p> <p><i>{When a question is not available through the SQL Search Service 1010, there is inherently a reporting unit within the server-side system 180 in order for the system administrator and the user to be notified.}</i></p>  |
| <p>Claim(s)<br/>13</p> | <p>Bennett et al. disclose:</p> <p>An translation system (col.10, ll.20-32) comprising:</p> <p>an electronic collection of user utterances (e.g., a set of potential questions corresponding to the user's query, col.25, ll.1-44; Fig.11a, 11b);</p> <p><i>{The set of potential questions, i.e., the collection of user utterances, corresponding to the user query is located on the Structured Query Language (SQL) database (Fig.4C: 711C) of DB engine server 186 (col.11, ll.6-9; col.25, ll.2-10; col.26, ll.30-32) whereas the answer to the most likely candidate of questions is located on the Natural Language Query System (NLQS) Database 188 (col.11, ll.9-11; Fig.4C: 717; col.29, ll.29).}</i></p> <p>an utterance search unit (SRE server-side 182 &amp; DB Processor, Fig.1: 186) which identifies a content of a given user utterance using the user utterance collection (e.g., SQL database, Fig.4C: 711); (see Fig.4B, 4C; col.28, ll.44-67; col.29, ll.1-28)</p> <p><i>{1. The DB Processor 186 conducts the search through the SQL Search Service (Fig.10: 1010). The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.</i></p> <p><i>2. Fig.4B shows how the best suitable question corresponding to the user query is retrieved from the SQL database. (col.28, ll.44-51, ll.65-67)}</i></p> <p>a dictionary file (e.g., Natural Language Voice Data File, Fig.3: 256, col.24, ll.1-4) which describes correspondence between multiple languages (e.g., French, German, or Japanese) for anticipated utterances (e.g., English) of the user;</p> <p>a function block (Fig.1: NLQS database 188, Animated Character to Guide User 157, and Text-to-Speech Engine 159) which offers a predefined service (e.g., e-commerce, e-support, or e-learning) to the user; (col.10, ll.26-32; col.29, ll.47-65)</p> |

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|                | <p>a target language setting unit (e.g., language of choice, col.8, ll.20-35) which sets a language (e.g., French, German, or Japanese) that is used by any number of users who assemble virtually to receive (through Internet, Fig.1: <b>160</b>) the offered service as a target language (e.g., French, German, or Japanese) for translation; and</p> <p>a corresponding expression search unit (Text-to-Speech Engine, Fig.3: <b>245</b>, col.24, ll.1-4) which compares a content of an utterance given by any one of said users, which is identified by the utterance search unit (DB Processor, Fig.1: <b>186</b>), with the dictionary file (e.g., Natural Language Voice Data File, Fig.3: <b>256</b>) and identifies an expression (e.g., answer to the user question or query) corresponding to the utterance in the target language (e.g., French, German, or Japanese);</p> <p>wherein the function block offers the corresponding expression embedded in said service.</p> <p><i>{The corresponding expression, e.g., the answers, are tied to a predefined service, e.g., e-commerce, e-support, or e-learning}</i></p> |
| Claim(s)<br>14 | <p>Bennett et al. disclose:</p> <p>The system of claim 13, wherein the function block customizes the service (e.g., e-commerce, e-support, or e-learning) for each user on a target language basis (e.g., language of choice, col.8, ll.20-35), by embedding the corresponding expression (e.g., answer to the user question) in each user's language into the service offered to each user. (see Fig.3: <b>243</b>)</p> <p><i>{The answer corresponding to a target language and a predefined service is presented to the user. (col.6, ll.57-60)}</i></p>   |
| Claim(s)<br>15 | <p>Bennett et al. disclose:</p> <p>The system of claim 13, wherein the user utterance collection (located SQL database of DB Processor <b>186</b>) and the dictionary file (Natural Language Voice File <b>256</b> of TTS engine <b>159</b>) are configured as different nodes accessing a network so that an identification of the content of the utterance and an identification of the corresponding expression are processed in a distributed manner (col.6, ll.51-60) for the service requested by the user via the network (Internet <b>160</b>). (see Fig.1)</p>   |

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| <p>Claim(s)<br/>16</p> | <p>Bennett et al. disclose:</p> <p>A user support apparatus (see Abstract; col.6, ll.27-30) comprising:</p> <p>a first block (Fig.1: SRE server-side <b>182</b>, Text-to-Query Converter <b>184</b>, Database Processor &amp; Interface <b>186</b>, and Natural Language Engine <b>190</b>) which has an electronic collection of user utterances (e.g., a set of potential questions corresponding to the user's query, col.25, ll.1-44; Fig.11a, 11b), and identifies a content of a given user utterance (e.g., identifies the content posed by the user question or query, col.11, ll.32-34); and</p> <p><i>{1. Blocks <b>182</b>, <b>184</b>, <b>186</b>, and <b>190</b> act as a first block, e.g., it receives the user utterance, parses the content, and understands the content lexically or morphologically. (col.12, ll.1-10)</i></p> <p><i>2. The set of potential questions, i.e., the collection of user utterances, corresponding to the user query is located on the Structured Query Language (SQL) database (Fig.4C: <b>711C</b>) of DB engine server <b>186</b> (col.11, ll.6-9; col.25, ll.2-10; col.26, ll.30-32) whereas the answer to the most likely candidate of questions is located on the Natural Language Query System (NLQS) Database <b>188</b> (col.11, ll.9-11; Fig.4C: <b>717</b>; col.29, ll.29).</i></p> <p><i>3. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig.10: <b>1010</b>). The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.</i></p> <p><i>4. The collection of utterances is stored in the Full-Text Catalog (Fig.10: <b>1013</b>).}</i></p> <p>a second block (Fig.1: NLQS database <b>188</b>, Animated Character to Guide User <b>157</b>, and Text-to-Speech Engine <b>159</b>) which has an electronic collection of action patterns (e.g., different interactions of the animated character <b>1440</b> in responding to the user, col.35, ll.64-67; col.20, ll.61-67; col.21, ll.1-3) for an agent for responding to user utterances, and enables the agent to respond to the given user utterance, (col.35, ll.64-67; col.36, ll.1-12, ll.33-51; col.20, ll.45-67; col.21, ll.1-14)</p> <p>wherein the user utterance collection (e.g., Full-Text Catalog <b>1013</b>) includes a general utterance library that stores general user utterances (e.g., "Help", col.37, ll.30) and a specialized utterance library that stores utterances (e.g., e-commerce related question such as "Is Album A by Brooks available?", col.35, ll.62) related to a specialized field of the agent.</p> |
| <p>Claim(s)<br/>17</p> | <p>Bennett et al. disclose:</p>  |

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|                | <p>A user support system (Fig.1) comprising a plurality of said user support apparatus (e.g., a collection of smaller systems, col.10, ll.50-53) of claim 16 connected to a network (e.g., Internet <b>160</b>) as independent network nodes, wherein each of the apparatus is provided according to each said specialized field (e.g., e-commerce, e-support, e-learning, col.10, ll.30-32), and each node is so configured as to be accessible from the user. (col.10, ll.33-53)</p> <p><i>{The server system <b>180</b> whether it is a large-scale system or a collection of smaller systems is configured to be accessible to the user through the Internet <b>160</b>. (col.10, ll.50-53)}</i></p>   |
| Claim(s)<br>19 | <p>Bennett et al. disclose:</p> <p>The system of claim 17, further including a library providing unit (e.g., Database Processor, Fig.10: <b>1000</b>) which manages the user utterance library (e.g., Full-Text Catalog, Fig.10: <b>1013</b>) and offers the user utterance library to a third party (e.g., user of the translation service over the Internet <b>160</b>, col.6, ll.51-60; col.10, ll.20-32) off line or on line.</p>  |
| Claim(s)<br>20 | <p>Bennett et al. disclose:</p> <p>The system of claim 17, wherein the first block (SRE server-side <b>182</b> &amp; DB Processor, Fig.1: <b>186</b>) includes:</p> <p>an utterance search unit which searches the utterance of the user (e.g., use query) in the user utterance collection (e.g., SQL database, Fig.4C: <b>711</b>); (see Fig.4B, 4C; col.28, ll.44-67; col.29, ll.1-28) and</p> <p><i>{1. Fig.4B shows how a best suitable question corresponding to the user query is retrieved from the SQL database. (col.28, ll.44-51, ll.65-67)</i></p> <p><i>2. The DB Processor <b>186</b> searches the utterance using SQL Search Service (Fig.10: <b>1010</b>).}</i></p> <p>a reporting unit which notifies a system administrator (col.31, ll.15-16) when the user utterance is not found in the user utterance collection. (col.36, ll.16-24)</p> <p><i>{When a question is not available through the SQL Search Service <b>1010</b>, there is inherently a reporting unit within the server-side system <b>180</b> in order for the system administrator and the user to be notified.}</i></p> |
| Claim(s)<br>21 | <p>Bennett et al. disclose:</p>  |

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|  | <p>The system of claim 20, wherein the first block further includes an index storing unit (Full Text Catalog: Fig.10: <b>1013</b>) that stores an index of contents of the user utterance collection (e.g., Full Text Index, Fig.10: <b>1014</b>), and the search unit initially searches the given user utterance in the index storing unit. (col.11, ll.44-46; col.18, ll.20-29)</p> <p><i>{The DB Processor <b>186</b> conducts the search through the Index Engine <b>1011B</b> and Search Engine <b>1012</b> using Full-Text Index <b>1014</b>. The result identifies the content, e.g., by returning the best suitable question that matches the question corresponding to the user query.}</i></p> |
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### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al. (U.S. Patent 6,615,172 B1) in view of Cook et al. (U.S. Patent 6,427,063 B1)

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| Claim(s)<br>5 | <p><u>Bennett et al. do not show:</u></p> <p>The system of claim 1, further comprising a recording unit which obtains a record of the user's access to the system, wherein the second block chooses one from a plurality of choices of the actions of the agent to respond to the user utterance depending on a situation of the user's access.</p> <p><u>Cook et al. teach:</u></p> <p>Agent behaviors or actions in responding to the user depend on the history or record of previous student performance stored in a student data object. (col.4, ll.49-51, ll.56-58; col.5, ll.9-14)</p> |
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|  | <p>It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the user support system of Bennett et al. to include the agent-based method of Cook et al. in order to choose the appropriate agent actions depending on the history of the user's access to the system. Agent behaviors or actions are important in application such as virtual tutor. (Cook et al., col.66, ll.23-40)</p> |
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6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al. (U.S. Patent 6,615,172 B1) in view of Thelen et al. (U.S. Patent 6,526,380 B1)

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| Claim(s)<br>18 | <p><u>Bennett et al. do not show:</u></p> <p>The system of claim 17, wherein the plurality of said user support apparatus independently manages each specialized utterance library and shares the general utterance library.</p> <p><u>Thelen et al. teach:</u></p> <p>using specialized utterance library (e.g., context specific vocabulary models, col.1, ll.56-67; col.2, ll.1-29) and general utterance library (e.g., generic model, col.3, ll.8-13) for recognition of the user utterances.</p> <p>It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the user support system of Bennett et al. to include the method of using plurality of context specific vocabulary models as well as a generic model as taught by Thelen et al. in order to improve the recognition accuracy of user utterances. (Thelen et al., col.2, ll.12-14 ; col.4, ll.6-8)</p> |
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***Allowable Subject Matter***

7. Claims 22-30 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

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| Claim(s)<br>22 | <p>The prior art fails to show:</p> <p>A user support apparatus comprising:</p> <p>an utterance identification block which has an electronic collection of user utterances, and identifies a content of a given user utterance; and</p> <p>a response block which has an electronic collection of action patterns for a first agent for responding to user utterances, and enables the first agent to respond to the user utterances,</p> <p>wherein the utterance identification block has an additional collection of anticipated utterances to which the first agent should react among utterances that a second agent make to the user, and identifies a content of an utterance of the second agent if the utterance of the second agent exists in the additional utterance collection, and wherein the response block has an additional collection of action patterns for the first agent for reacting to the utterances of second agent, and enables the first agent to occasionally react to the utterances of the second agent.</p> |
| Claim(s)<br>23 | <p>The prior art fails to show:</p> <p>The apparatus of claim 22, wherein the additional utterance collection is incorporated into the user utterance collection, and the user utterance and the second agent utterance are matched with the integrated user utterance collection without any discrimination, when a process of the utterance identification block comes to at least a final stage.</p>  |
| Claim(s)<br>24 | <p>The prior art fails to show:</p> <p>The apparatus of claim 22, wherein both the first agent and the second agent are implemented on this apparatus, and the utterance identification block and the response block</p>   |

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|                | are symmetrically provided for the first agent and the second agent, and while the second agent mainly responds to the user instead of the first agent, the first agent occasionally reacts to the utterances of the second agent.  |
| Claim(s)<br>25 | <p>The prior art fails to show:</p> <p>A user support system comprising a plurality of said user support apparatus of claim 22 connected to a network as independent network nodes, wherein each of the apparatus is provided according to each specialized field, and the additional utterance collection, the agent action collection, and the additional action collection of each user support apparatus are generated according to each specialized field.</p> |
| Claim(s)<br>26 | <p>The prior art fails to show:</p> <p>The system of claim 25, wherein the plural user support apparatus include the respective response blocks therein and shares the utterance identification block at any one of the network nodes.</p>  |
| Claim(s)<br>27 | <p>The prior art fails to show:</p> <p>The system of claim 25, wherein each user support apparatus includes the first agent on the apparatus, and if the first agent appears on any other apparatus, the first agent acts as a second agent on said other apparatus.</p>  |
| Claim(s)<br>28 | <p>The prior art fails to show:</p> <p>The system of claim 25, wherein the utterance identification block includes: an utterance search unit which searches the utterance of the user in the user utterance collection; and a reporting unit which notifies a system administrator when the user utterance is not found in the user utterance collection.</p>   |
| Claim(s)<br>29 | <p>The prior art fails to show:</p> <p>The system of claim 28, wherein the utterance identification block further includes an index storing unit that stores an index of contents of the user utterance collection, and the</p>   |



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|                | search unit initially searches the given user utterance in the index storing unit.  |
| Claim(s)<br>30 | <p>The prior art fails to show:</p> <p>The system of claim 25, further including a library providing unit which offers the user utterance library to a third party off line or on line.</p> |

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### U.S. Patent Documents:

- |                  |         |               |
|------------------|---------|---------------|
| [1] 6,446,076 B1 | 09/2002 | Burkey et al. |
| [2] 6,240,405 B1 | 05/2001 | Suzuki        |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Lao whose telephone number is 703-305-8955.

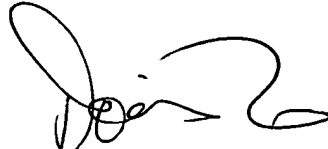
The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Lao  
Examiner  
Art Unit 2655

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